SOIL Series	Layer	K Factor	Texture
Swanton	A	.32	fsl
	B	.32	fsl
	C	.49	c
Teel	All	--	--
Terrace escarpments, clay	A	.49	sil
	B	.43	sicl
	C	.28	sic
Terrace escarpments, sand and clay	A	.32	fsl
	B	.32	fsl
	C	.49	sic
Terrace escarpments	A	.17	gr-sl
	B	.17	gr-ls
Terrace escarpments, sand & gravel	C	.15	sr-sg
Tisbury	A	.43	sil
	B	.64	sil
	C	.17	sr-sg
Udorthents	--	Variable	--
Unadilla	A	.49	sil
	B	.64	sil
	C	.64	sil
Urban Land		Variable	
Wallington	A	.49	sil
	B	.49	sil
	C	.49	sil
Walpole	A	.20	fsl
	B	.28	sl
	C	.17	sr-sg
Wapping	A	.49	sil
	B	.64	sil
	C	.28	gr-fsl
Wareham	A	.17	lfs
	B	.17	ls
	C	.17	s
Watchaug	A	.20	fsl
	B	.43	fsl
	C	.43	gr-sl
Westbrook	All	--	--
Wethersfield	A	.24	l
	B	.43	l
	C	.17	gr-l

SOIL Series	Layer	K Factor	Texture
Whately	All	--	--
Whitman	A	.24	fsl
	B	.24	sl
	C	.24	gr-sl
Wilbraham	A	.24	sil
	B	.43	sil
	C	.17	gr-l
Windsor	A	.17	ls
	B	.17	ls
	C	.17	s
Winooski	All	--	--
Woodbridge	A	.24	fsl
	B	.43	fsl
	C	.17	gr-fsl
Yalesville	A	.28	fsl
	B	.43	fsl
	Bedrock		

USDA TEXTURES

sr-sg	stratified sand and gravel
s	sand
ls	loamy sand
gr-ls	gravelly loamy sand
grv-ls	very gravelly loamy sand
lfs	loamy fine sand
fsl	fine sandy loam
gr-fsl	gravelly fine sand loam
sl	sandy loam
gr-sl	gravelly sandy loam
l	loam
gr-l	gravelly loam
sil	silt loam
cn-sil	channery silt loam
gr-sil	gravelly silt loam
sicl	silty clay loam
sic	silty clay
c	clay

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K Value = 1.0
R = 150

TABLE 2A

SOIL LOSSES IN CUBIC YARDS PER ACRE PER YEAR
Soil Textures - l, gr-l, sil, cn-sil, gr-sil, sicl, sic, c
RKLS X 0.87

PERCENT SLOPE	SLOPE LENGTH IN FEET															
	60	80	100	120	140	160	180	200	300	400	500	600	700	800	900	1000
1.0	14	16	17	18	18	20	20	21	23	26	27	29	30	31	33	34
2.0	22	25	26	27	29	30	31	33	37	40	43	44	47	50	51	52
3.0	33	35	38	39	42	43	44	46	52	57	61	64	68	70	73	74
4.0	43	48	52	56	60	63	67	69	81	91	99	107	114	120	125	132
5.0	54	63	70	77	82	89	94	99	121	140	157	171	185	198	210	221
6.0	68	78	87	97	104	111	117	124	153	176	196	215	232	248	264	278
8.0	100	116	129	142	153	163	174	183	224	258	290	317	342	367	389	410
10.0	138	161	179	196	211	226	240	253	309	353	399	438	472	505	536	565
12.0	183	210	235	258	279	298	316	333	408	471	527	577	622	666	706	745
14.0	232	268	299	328	355	378	402	424	519	599	669	733	792	847	898	947
16.0	287	331	371	406	438	468	497	523	642	741	829	907	980	1048	1112	1172
18.0	347	401	448	491	530	566	602	634	776	897	1002	1098	1186	1267	1344	1417
20.0	412	476	532	583	630	673	714	753	923	1065	1190	1304	1382	1506	1597	1684
25.0	595	688	769	842	910	972	1031	1087	1331	1537	1719	1883	2034	2174		
30.0	803	928	1037	1137	1228	1313	1392	1468	1798	2076	2322	2542				
40.0	1279	1477	1651	1809	1954	2089	2216	2336	2860	3303						
50.0	1802	2080	2326	2549												

K Value = 1.0
R = 150

TABLE 2B

SOIL LOSSES IN CUBIC YARDS PER ACRE PER YEAR
Soil Textures - sr-sg,s,ls,gr-ls,grv-ls,lfs,fsl,gr-fsl,sl,gr-sl
RKLS X 0.70

PERCENT SLOPE	SLOPE LENGTH IN FEET															
	60	80	100	120	140	160	180	200	300	400	500	600	700	800	900	1000
1.0	12	13	14	15	15	16	16	17	19	21	22	23	24	25	26	27
2.0	18	20	21	22	23	24	25	26	29	33	35	36	38	40	41	42
3.0	26	28	31	32	34	35	36	37	42	46	49	52	55	57	59	60
4.0	35	39	42	45	48	50	54	56	65	74	80	86	91	97	101	106
5.0	43	50	57	62	66	71	76	80	98	112	126	138	149	160	169	178
6.0	55	63	70	78	84	89	95	100	123	142	158	173	187	200	212	224
8.0	81	94	104	115	123	131	140	147	181	208	233	255	275	295	313	330
10.0	111	129	144	158	170	182	193	204	249	288	321	353	380	406	432	455
12.0	147	169	189	208	225	239	254	268	329	379	424	464	501	536	568	600
14.0	187	215	241	264	286	305	323	341	418	482	539	590	637	682	722	762
16.0	231	267	298	327	353	377	400	421	517	596	667	730	789	843	895	943
18.0	279	322	360	395	426	456	484	510	625	721	806	883	955	1020	1082	1140
20.0	332	383	428	469	507	542	574	606	742	857	958	1049	1133	1212	1285	1355
25.0	479	553	618	677	732	782	830	875	1071	1237	1383	1515	1637	1749		
30.0	647	747	835	915	988	1056	1120	1181	1447	1671	1868	2045				
40.0	1029	1210	1328	1445	1572	1681	1783	1880	2302	2658						
50.0	1450	1674	1871	2051												

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TABLE 3

COVER INDEX FACTOR C -- CONSTRUCTION SITES

Type of Cover	Application Rate Tons Per Acre	Factor C	Percent 1/
None (fallow ground)		1.0	0.0
Temporary Seedings (90 percent stand):			
Ryegrass (perennial type)		0.05 2/	95
Ryegrass (annuals)		0.1	90
Small grain		0.05	95
Millet or sudan grass		0.05	95
Field bromegrass		0.03	97
Permanent Seedings (90 percent stand):		0.01	99
Sod (laid immediately):		0.01	99
Mulch:			
Hay	.50	0.25	75
Hay	1.00	0.13	87
Hay	1.50	0.07	93
Hay	2.00	0.02	98
Small grain straw	2.00	0.02	98
Wood chips	6.00	0.06	94
Wood cellulose	1.75	0.10	90
Fiberglass	.50	0.05	95
Asphalt emulsion (1,250 gals/acre)		0.02	98

Fiber matting, excelsior, gravel and stone may also be used as protective cover.

1/ Percent soil loss reduction as compacted with fallow ground.
2/ Example 3

TABLE 4

PRACTICE FACTOR P
SURFACE CONDITION FOR CONSTRUCTION SITES

Surface Condition With No Cover	Factor P 1/
Compact and smooth, scraped with bulldozer or scraper up and downhill	1.3 2/
Same condition, except raked with bulldozer root rake up and downhill	1.2
Compact and smooth, scraped with bulldozer or scraper across the slope	1.2
Same condition, except raked with bulldozer root rake across the slope	0.9
Loose as a disked plow layer	1.0
Rough irregular surface equipment tracks in all directions	0.9
Loose with rough surface greater than 12" depth	0.8
Loose with smooth surface greater than 12" depth	0.9

1/ Values based on estimates.
2/ Example 4

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TABLE 5

ADJUSTMENT FACTOR "M" FOR ESTIMATING MONTHLY AND PORTIONS OF ANNUAL SOIL LOSS

Month	Connecticut (R = 150) Percent
January	3
February	3
March	5
April	4
May	6
June	12
July	13
August	18
September	13
October	8
November	8
December	7
	100

Solution for Example 2

By summation:

	Percent
October	8
November	8
December	7
January	3
February	3
March	5
April	4
May	6
	44

By subtraction: 1/

	Percent
June	12
July	13
August	18
September	13
	56

Summary of above "M" = 44 "M" = 100-56 44

1/ This procedure is used for Example 3.

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Tables 2A and 2B contain soil losses in cubic yards per acre per year. The values of R, L and S in the soil loss equation and the conversion factor to change tons to cubic yards per acre are combined in these tables. Table 2A is for soils of coarse texture. Table 2B is for soils of medium texture. The texture of the B and C Horizon for each soil series is listed in Table 1. There is a Table 2A and Table 2B for each erodibility class (K value) given in Table 1. The average annual erosive rainfall factor (R value) is 150.

Table 3 contains erosion-index values for average annual rainfall, probability annual rainfall and expected magnitudes of single storms at key locations. The Erosion Index (or EI value) is the designation for erosive rainfall for part of a year. The EI values are determined by reference to Table 3 and Figure 1.

Figure 1 - Erosion Index Distribution Curve. This curve is used to estimate the percent of the total erosion-index for any specific part of a year.

Table 4 indicates the effectiveness of various ground covers for erosion control.

Examples of how to use the soil loss equation on construction sites.

Field Measurement of Rill Erosion.

APPENDIX B

ESTIMATING RAINFALL-EROSION SOIL LOSSES ON CONSTRUCTION SITES AND SIMILARLY DISTURBED AND UNVEGETATED AREAS

The method of estimating rainfall-erosion soil losses described here applies to construction sites and similarly disturbed and unprotected areas. It is based on the USDA Universal Soil-Loss Equation. Losses estimated are for sheet erosion resulting from rainfall runoff. The method does not account for large quantities of soil material that may be lost by rill and gully erosion resulting from heavy concentrations of runoff water and snow melt. Soil losses from these kinds of erosion are in addition to losses caused by sheet erosion.

The equation is:

$$A = RKLSCP$$

where A is the computed soil loss expressed in cubic yards per unit of area.

R is the average annual rainfall factor.

K is the soil erodibility factor.

L is the slope-length factor.

S is the slope-gradient factor.

C and P are the cropping-management and erosion-control practice factors, each of which have a value of one and are not considered in estimating soil losses on non-agricultural land.

The contents of this section consist of the following tables, figures and examples for using the soil loss equation on construction sites and other disturbed areas.

Table 1 contains erodibility (K) values and textures of the B and C horizons for the soil series. Values for the B and C horizons, rather than values for the surface soil, are given since these soil layers are the ones usually left exposed when the site is disturbed. The horizons are defined as follows:

B Horizon - A soil layer below the organic surface layer. It typically has strong colors, granular structure, and is the layer in which organic matter and minerals usually accumulate.

C Horizon - A soil layer that generally lies beneath the B horizon and has been subjected to but very little weathering.